United States Coast Guard

BARGE INSPECTION BOOK

Name of Vessel		
Official Number	**Class**	
Date Completed	**Location**	
Route		
Oceans	Limited Coastwise	Lakes / Bays / Sounds
Coastwise	Great Lakes	Rivers
Inspection Type		
Inspection for Certification (COI)	Reinspection	
Drydock Inspection	Underwater Survey in Lieu of Drydock (UWILD)	
Internal Structural Examination (ISE)	Cargo Tank Internal Examination (CTIE)	
Inspectors		
1. _____	**2.** _____	

CG-840 B
Rev. 1/01

Notes:

Use of Barge Inspection Book:

This inspection book is intended to be used as a job aid by Coast Guard marine inspectors during inspections of U.S. flagged barges. The lists contained within this book are not intended to limit the inspection. Each marine inspector should determine the depth of inspection necessary. A checked box should be a running record of what has been inspected. It does not imply that the entire system has been inspected or that all or any items are in full compliance. This job aid does not constitute part of the official inspection record.

This document does not establish or change Federal laws or regulations. References given are only general guides. Refer to IMO publications, CFR's, NVIC's or any locally produced cite guides for specific regulatory references. Not all items in this book are applicable to all vessels.

NOTE: *Guidance on how to conduct inspections of U.S. flagged barges can be found in the Marine Safety Manual (MSM) Volume II, Chapter B1: Inspection of Vessels for Certification. All MSM cites listed in this book refer to MSM Volume II unless otherwise indicated.*

Pre-inspection Items:

- Review MSIS records.
  - MIPIP
  - MICOI
- Obtain copies of forms to be issued.

Post-inspection Items:

- Issue letters/certificates to vessel.
- Complete MSIS entries.
  - MIAR
  - MSDS
  - MIDR
  - VFLD
  - VFID
- Initiate Report of Violation (ROV) if necessary.

Deficiency	MSIS Code	Req't. Issued / Date Completed

Deficiencies identified should be listed with MSIS codes. At completion of inspection/examination, any outstanding deficiencies shall be entered in MIDR or PSDR as appropriate. All deficiencies found (outstanding and completed) shall be entered in the Deficiency Summary. Worklist items, which serve only as memory joggers to complete inspection/examination (e.g., test emergency fire pump), should not be coded as deficiencies.

MSIS Codes for Deficiencies:

BS	Ballast	**DC**	Dry Cargo	**IC**	I/C Engine
BI	Bilge	**ES**	Electrical	**LS**	Lifesaving
BA	Boiler, Aux.	**FF**	Firefighting	**MI**	Miscellaneous
BM	Boiler, Main	**FL**	Fuel	**NS**	Navigation
CS	Cargo	**GS**	General Safety	**PP**	Propulsion
DM	Deck Machinery	**HA**	Habitation	**SS**	Steering
DL	Doc., Lics., Pmts.	**HU**	Hull		

Table of Contents:

Recommended US Vessel Deficiency Procedures:

Step	Action
1	Identify deficiency.
2	Inform vessel representative.
3	Record on the *Deficiency Summary Worksheet* (next page).
4	If deficiency is corrected prior to end of inspection, go to Step 7.
5	If deficiency is unable to be corrected prior to end of inspection, issue CG-835 in accordance with table below.
6	Enter CG-835 data in MIDR.
7	Enter deficiency data in MSDS.
8	Initiate Report of Violation (ROV) if necessary.

IF deficiency:	**THEN issue CG-835:**
Does NOT immediately impact crew/passenger safety, hull seaworthiness, or the environment, e.g., • Missing placards	That provides a specific time for correcting deficiency, e.g., • "X" number of days
Allows vessel operations to be MODIFIED to meet less stringent requirements, e.g., • P/V valves fail to seal properly	That restricts operation of vessel to meet current vessel conditions, e.g., • Reduced cargo grade
DOES immediately impact crew/passenger safety, hull seaworthiness, or the environment, and cannot be modified to meet less stringent requirements, e.g., • Structural defect or damage	That requires the deficiency to be corrected prior to operating vessel ("NO SAIL" item), e.g., • Prior to carrying cargo

Involved Parties & General Information:

Vessel's Representatives _____ _____
Phone Numbers

Owner—Listed on DOC (if applicable), or COFR
No Change

Operator
No Change

☐ Sea valves

46 CFR 42.09-25
46 CFR 56.50-95

- Fitted where required
- Opened for examination
- Body
- Guides
- Threads
- Seat
- Stems
- Discs
- Plug cocks
- Holding down bolts
- Closure tested (local and/or remote)

Ground Tackle:

☐ Proper ground tackle

46 CFR 32.15-15
46 CFR 96.07-5
ABS Rules

- Anchor cables ranged
  - Yes
  - No
- Cable shackles and pins
- Anchors
- Hawse pipes and covers
- Chain pipes and covers
- Chain lockers

Notes:_____
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Section 2: Certificates and Documents

Name of Certificate	Issuing Agency	ID #	Port Issued	Issue Date	Exp. Date	Endors. Date
Certificate of Documentation No Change	USCG					
Classification Document No Change						
Certificate of Financial Responsibility (COFR) No Change	USCG					
International Load Line (ILL) No Change						
International Oil Pollution Prevention (IOPP) No Change						
Certificate of Fitness (COF) No Change	USCG					
International Tonnage (ITC) No Change						

Internal Structural Examination:

☐ Internal structural members — 46 CFR 31.10-21; 46 CFR 91.40-3; MSM Ch. B3.B.6; NVIC 7-68; NVIC 15-91, Change 1; 46 CFR 42.09-30

- Bulkheads
- Decks
- Tank tops
- Longitudinals
- Floors
- Frames
- Intercostals
- Stiffeners
- Beams
- Connections

☐ Vessel carefully examined for fractures and previous fracture repairs — MSM Ch. B3.B.6.d; NVIC 15-91, Change 1

☐ Fastenings — MSM Vol. IV Ch. 6.H; NVIC 3-68

- Rivets
- Welding

☐ Void / ballast tanks entered

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

Overall Condition of Coatings:

Poor	Good

N/A

Overall Steel Wastage:

Poor	Good

N/A

Notes:_____

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☐ Vessel response plan (vessels carrying oil as primary cargo) — 33 CFR 155.1030

- Manned barges — 33 CFR 155.1035
- Unmanned barges — 33 CFR 155.1040

☐ Vessel response plan (vessels carrying oil as secondary cargo) — 33 CFR 155.1045; 33 CFR 155.1030

☐ Transfer procedures — 33 CFR 155.720

- Posted
- List of products carried by vessel
- Description of transfer system including a line diagram of piping
- Number of persons required on duty
- Duties by title of each person
- Means of communication
- Procedures to top off tanks
- Procedures to report oil discharges
- VCS information — 33 CFR 155.750
- Amendments authorized
- Transfer flag and light

☐ Waiver letters carried — 46 CFR 153.10

Notes: _____

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Section 4: Drydock Inspection Items

NOTE: *Barges that undergo an underwater survey in lieu of a drydock examination should be inspected using the guidance and checklist found in the CG-840 DD book.*

Certificates and Documents:

☐ Marine Chemist Certificate — 46 CFR 35.01-1, MSM Ch. A5.H, NFPA 306

- Marine Chemist No. _____
- Certificate No. _____
- Date issued _____

☐ Gauging report — 46 CFR 31.10-21(a), ABS Steel Rules 1/3

- Date issued _____
- Vessel over 30 years

External Structural Examination:

NOTE: *Request records of Outstanding Conditions of Class. (Form or format may vary depending on classification society.) Conditions of Class may identify structural defects, wastage, etc.*

☐ Vessel plans available (barges with load lines) — 46 CFR 31.10-22, 46 CFR 91.40-5

☐ External structural members — 46 CFR 31.10-21, 46 CFR 91.40-3, NVIC 7-68

- Plating
- Caulking
- Reinforcing straps
- Rakes
- Welds
- Pitting
- Rub bars

Overall Steel Wastage:

Poor	Good

Areas of particular interest:_____

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☐ Benzene monitoring program — 46 CFR 197.570, NVIC 6-92, Change 1

- Record of personal exposure
- Medical records

☐ Combustible gas indicator (manned barges) — 46 CFR 35.30-15, NVIC 12-86

☐ Emergency outfit (for tanks > 15 feet deep) — 46 CFR 35.30-20

- Required equipment
- Condition
- Stowage
- Markings — 46 CFR 32.05-5

☐ Liquefied flammable gas systems for cooking and heating — 46 CFR 61.15-10

- Marking and instructions
- Controls
- Piping
- Cylinders
- Appliances
- Safety devices
- Compartment ventilation
- Evidence of tests

Structural Integrity:

☐ Hull structure (list inaccessible compartments or areas) — 46 CFR 31.10-1, 46 CFR 31.10-15, 46 CFR 91.15-1, 46 CFR 92.01, 46 CFR 42.09, 46 CFR 42.15, ICLL 66 Reg. 1

- Decks
- Shell
- Bulkheads
- Tank tops
- Strength members
- Double bottom
  - Yes
  - No
- Double sides
  - Yes
  - No

Notes: _____

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☐ Discharge removal equipment — 33 CFR 155.210, 33 CFR 155.215
- Sorbents
- Non-sparking tools
- Containers
- Emulsifiers
- Protective clothing
- Scupper plugs
- Non-sparking portable pump

☐ Emergency towing equipment (offshore oil) — 33 CFR 155.230

☐ Emergency lightering equipment (barges > 5000 GT) — 33 CFR 157.410

☐ Garbage — 33 CFR 151.63, MARPOL Ax. V/3
- Shipboard garbage properly disposed (oceangoing manned barges only)

☐ MARPOL Annex I survey — 33 CFR 151.09
- Discharge of cargo residue
- Approved monitoring and control system

☐ MARPOL Annex II survey — 33 CFR 151.30
- Discharge of cargo residue
- Approved monitoring and control system

☐ Barges that ballast cargo tanks — 33 CFR Part 157
- Pumping, piping, and discharge arrangements — 33 CFR 157.11
- Designated observation area — 33 CFR 157.13
- Slop tank — 33 CFR 157.15
- Cargo and ballast information — 33 CFR 157.23
- Instruction manual — 33 CFR 157.49

Notes: _____

☐ Load line marks — 46 CFR 31.25-1, 46 CFR 97.40-15, ICLL 66 Regs. 4 - 9
- Conform to certificate
- Legible

☐ Main deck area
- Extraneous material
- Fire hazards

Cargo Operations:

☐ Cargo tanks — 46 CFR 91.25-37
- Trunks and hatches
- Ullage openings
- Liquid level gauges — 46 CFR 151.15-10, 46 CFR 39.20-3
  - Open
  - Restricted
  - Closed
- Deck penetrations — 46 CFR 32.50-15
- Heating coils
- Internal examination
- Explosion-proof electrical fittings — 46 CFR 111.105
- Overfill device — 33 CFR 155.480

☐ Cargo tank venting

Common header system
- P/V valves — 46 CFR 32.20-5
- Flame arrestors — 46 CFR 32.20-10
- Flush and drain connections — 46 CFR 151.15-5

Independent PV valves — 46 CFR 32.55-25
- Flame screen — 46 CFR 32.20-10
- Valve material (dangerous cargoes) — 46 CFR 151.56
  - Zinc, copper alloys, copper, or aluminum
  - Cast or carbon steel
  - Stainless steel

Independent goosenecks
- Flame screen — 46 CFR 32.55-25
- Closure device — 46 CFR 32.20-10

Notes: _____

☐ Air compressor intakes prohibited in restricted areas — 46 CFR 32.35-15

☐ Electrical equipment

- Generators — 46 CFR 111.12
- Motors — 46 CFR 111.25
- Controllers — 46 CFR 111.70
- Switchboard — 46 CFR 111.30
- Lighting — 46 CFR 111.75
- Batteries and chargers — 46 CFR 111.15
- Wiring — 46 CFR 111.60
- Overcurrent protection — 46 CFR 111.50
- Grounding — 46 CFR 111.05
- Markings and instructions

☐ Pressure vessels hydrostatically tested or internally examined — 46 CFR 61.10, MSM Ch. B1.O, MSM Vol. IV Ch. 3.I.7

Service	MAWP	Date Tested or Examined Internally	Relief Valve Tested

☐ Relief valves springs set within range — 46 CFR 54.15-10(g)

☐ Bilge system — 46 CFR 32.52, 46 CFR 96.03-1, 46 CFR 56.50-55(b)

Notes:_____

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☐ Independent tanks, fixed, portable, or marine portable — 46 CFR 98.30

- External examination
- Date of internal examination
- Date of hydrostatic test
- Metal information plate
- Marking and labeling
- Saddles; foundation and stowage
- Piping and valves
- Relief valves
- Lifting fittings
- Securing devices
- Pump and controls
- Cargo hose
- Electrical grounding
- Firefighting requirements
- Authorized cargo

☐ Tanks for liquefied flammable gas or flammable or combustible liquid having lethal characteristics, or dangerous cargoes — 46 CFR 38.01-1

- Markings
- Lagging and fire protection
- Manholes
- Piping
- Fittings
- Gauges
- Valves
- Controls
- Fill and vent
- Foundations and supports

Type of Examination / Test	Date of Examination / Test
Internal Examination	
External Examination (Lagging Removed)	
Safety Valve Test	
Hydrostatic Test	

Notes: _____

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☐ Fixed fire extinguishing systems — 46 CFR 34.05-5, 46 CFR 95.05-10

CO_2 — 46 CFR 34.15, 46 CFR 95.15
- Cylinders weighed annually
- Cylinders hydrostatically tested (every 12 years) — NVIC 8-73, NVIC 6-72, Change 1
- Controls, instructions, and markings
- Alarms, time delays
- Piping, heads
- Flex loops tested / replaced (10% per year)
- Ventilation stops
- Closures for openings

Sprinklers — 46 CFR 34.30
- Pumps — 46 CFR 95.30
- Pressure tanks — NFPA-13 (1996)
- Piping, heads — NVIC 6-72, Change 1
- Alarms

Foam — 46 CFR 34.17
- Pumps — 46 CFR 95.17
- Tank — NVIC 6-72, Change 1
- Piping, heads
- Foam tested

Boilers:

☐ Auxiliary boilers — MSM Ch. B1.H, 46 CFR 52.01-2, 46 CFR 52.01-35
- Combustion chambers
- Refractory
- Casing and insulation
- Tubes and shells — 46 CFR 52.15-5
- Piping
- Uptakes
- Foundations
- Gauges

Notes: _____

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☐ Operational test — 46 CFR 61.30-20
- Pre-purge
- Ignition sequence
- Combustion controls
- Flame safeguards
- Limit controls — 46 CFR 63.25-5
  - Low fluid level cutout
  - Low flow cutout
  - High temperature cutout
- Post-purge

Ground Tackle:

☐ Anchors — 46 CFR 32.15-15, 46 CFR 96.07

☐ Cable

Material	Size	Length

Lifesaving Equipment:

NOTE: *Exemptions and alternatives for vessels not subject to SOLAS can be found in 46 CFR 199.600.*

☐ General alarms — 46 CFR 32.25, 46 CFR 113.25
- Controls
- Batteries and fuses
- Tested
- Markings
- Bell locations audible

Notes: _____

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